

REMARKS

Claims 1-17, and 19-26 are now pending in the application. Claim 18 is canceled, Claim 26 is added, and Claims 22-25 are withdrawn by this Amendment. Minor amendments have been made to the claims to simply overcome the rejections of the claims under 35 U.S.C. § 112. The amendments to the claims contained herein are intended to broaden the scope thereof and/or are of equivalent scope as originally filed and, thus, are not a narrowing amendment. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

RESTRICTION REQUIREMENT

Applicants note that the Restriction Requirement has been made final, and submit that each of the presently pending claims are within the scope of the elected group defined by the Examiner. Further, Applicants submit that the ablative composition recited in Claims 1-17 and 18-21 and 26 is appropriately claimed as recited in the various claims.

APPLICANT INITIATED INTERVIEW SUMMARY

Applicants would like to thank the Examiner for the interview granted on June 5, 2007 with Applicants' Representative. During the interview, independent Claims 1 and 13 were discussed with the Examiner in light of the various §112 rejections. Applicants' Representative argued that the claims should not be read or interpreted to merely list

materials within a composition, but are directed to an ablative composition such as a thermal protection layer for a surface or layers that cooperatively formed in as a composition. Applicants' Representative also argued that the cited art did not teach or render apparent the presently pending claims. Although an agreement as to allowability of the presently pending claims was not reached with the Examiner, Applicants' Representative does believe that an agreement was reached that the cited art does not anticipate or render obvious the pending claims.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-21 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. These rejections are respectfully traversed.

Applicants respectfully submit that the Claims 1-21 are directed to a material as recited in the various claims. While Applicants submit that the claims as filed did not include method steps mixed with apparatus elements, Applicants do submit that the claims as filed are directed to a material or system that forms a composition that is adapted to form a thermal protection layer for the surface. As filed, independent Claim 1 recited "an ablative material adapted to be applied to a surface; an intumescent material intermixed with at least a portion of the ablative material to form the ablative composition; and wherein the ablative composition forms a thermal protection layer for the surface." Applicants respectfully submit that the ablative composition recited in independent Claim 1 formed as a thermal protection layer is recited in independent Claim 1 and is, therefore, definite. Claim 13 recited, "a first quantity of an ablative

material adapted to be applied to a surface as a first ablative layer; an intumescent material intermixed with a second quantity of said ablative material and applied as a second ablative layer on said first ablative layer; and wherein said first and second layers cooperatively form said ablative composition.” Applicants also submit that the ablative composition formed as the first and second layers is definite. Applicants respectfully submit that the ablative composition recited in independent Claim 1 can form a thermal protection layer as recited in independent Claim 1 and is, therefore, definite. Nevertheless, Applicants have amended Claims 1-21 only to expedite prosecution of the present application.

Applicants submit that the amendments to Claims 1-21 overcome each of the rejections under § 112, and request that the Examiner withdraw the rejections.

REJECTION UNDER 35 U.S.C. § 102 AND 103

Claims 1-5, 8-9, 12-13, 15-18 and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sawko et al. (U.S. Pat. No. 4,088,806). Claims 1-5, 8-9, 11, 12, 13, 15-18 and 20-21 stand rejected under 35 U.S.C. 102(b) as being anticipated by Tzur (US 4,632,865). Claims 1-5, 8-9, 12-13, 15-18 and 21 stand rejected under 35 U.S.C. 102(b) as being anticipated by McGinnis et al. (US 5,603,990). Claims 6, 7, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawko et al. Claims 6, 7, and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Tzur/McGinnis et al. in view of Sawko et al. Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawko et al./Tzur/McGinnis et al. in view of

Deogan et al. (US 5,900,281). Claims 11 and 20 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over Sawko et al./McGinnis et al. in view of Tzur. These rejections are respectfully traversed.

Sawko et al. is directed to coatings with endothermic fillers. The material is prepared by mixing the components. See col. 5, lines 30-35. The mixture is then applied to a substrate. See col. 6, lines 15-27.

Contrary to Sawko et al, independent Claim 1 recites “an ablative material . . . an intumescent material intermixed with at least a portion of the ablative material . . . wherein the ablative composition is adapted to form a thermal protection layer for the surface; wherein the intumescent material is intermixed with only a portion of a thickness of the thermal protection layer of the ablative material.” Sawko et al., however, does not appear to disclose or render apparent the intumescent material intermixed with only a portion of a thickness of the thermal protection layer. Therefore, independent Claim 1, and each of the claims that depend directly or indirectly therefrom, is in condition for allowance.

Independent Claim 13 recites “a first quantity of an ablative material . . . an intumescent material intermixed with a second quantity of said ablative material and operable to be applied as a second ablative layer on said first ablative layer; and wherein said first and second ablative layers cooperatively form said ablative composition.” As discussed above, Sawko et al. does not teach or render apparent an intumescent material intermixed with a second quantity of ablative material and first and second layers. Therefore, independent Claim 13, and each of the claims that depend directly or indirectly therefrom, is in condition for allowance.

Again, Applicants respectfully submit that the ablative composition recited in Claims 1-21 are directed to the material which can include an appropriate configuration, such as the portion of the thickness of the thermal protection layer recited in original Claim 2 and now in amended Claim 1 and the first and second ablative layers in original Claim 13.

Tzur is directed to a multi layer fire retardant composition. Tzur teaches that "Stage 2" can provide multiple layers. See col. 15, lines 17-20. Nevertheless, the composition of the layers includes a hardener mixed completely to form the layers. See col. 16, lines 5-12.

Contrary to Tzur, as discussed above, independent Claim 1 has been amended to recite "wherein intumescent material is intermixed with only a portion of a thickness of the thermal protection layer." Independent Claim 13 has been amended to recite "an intumescent material intermixed with a second quantity of said ablative material . . . wherein first and second ablative layers cooperatively form said ablative composition." Therefore, in independent Claim 1 the intumescent materials intermixed with only a portion of the thickness of the ablative material and independent Claim 13 recites that the intumescent materials intermixed with a second quantity of ablative material in a second layer. Therefore, independent Claims 1 and 13 are in condition for allowance in light of Tzur, as is each of the claims that depend directly or indirectly therefrom.

McGinnis et al. is directed to a thermally protective coating method. McGinnis et al. discloses that two layers can be provided to form two char layers or two foams can be mixed to provide a single coating layer. See col. 2, line 62, col. 3, line 37.

Contrary to McGinnis et al., as discussed above, independent Claim 1 has been amended to recite “wherein intumescent material is intermixed with only a portion of a thickness of the thermal protection layer of the ablative material.” McGinnis et al. does not teach or render apparent an intumescent material intermixed in such a manner within an ablative material. Independent Claim 13, contrary to McGinnis et al., has been amended to recite “a first quantity of an ablative material . . . an intumescent material intermixed with a second quantity of said ablative material . . . wherein said first and second ablative layers cooperatively form an ablative composition.” Again, McGinnis et al. does not teach or render apparent an intumescent material intermixed with a second quantity of an ablative material. Therefore, independent Claims 1 and 13, and each of the claims that depend directly or indirectly therefrom, is in condition for allowance.

Deogan et al., also fails to teach or render apparent each of the elements of the presently pending claims.

In addition to the independent claims, various dependent claims also include patentable subject matter. For example, dependent Claim 4 recites that the ablative composition can include the intumescent material intermixed in different quantities and “operable to be applied in successive layers to the surface, so that the ablative composition is operable to be formed by a series of layers with the layers each having a different concentration of said intumescent material mixed therein.” Dependent Claim 5 recites “an outer most layer having a maximum concentration of said intumescent material intermixed therein.” Dependent Claims 6-7 recites specific weight percents and Claims 8 and 9 recite various thicknesses of the ablative composition.

Further various of the claims that depend directly or indirectly from independent Claim 13 also include further patentable subject matter. For example, dependent Claim 16 recites "wherein each of the plurality of layers comprising intumescent material and the ablative material include different concentrations of said intumescent material." New Claim 26 recites "wherein each layer of the plurality of layers has a successfully greater concentration of said intumescent material, wherein an outer most layer has a maximum concentration of said intumescent material." Applicants respectfully submit that the cited art, either alone or in combination, does not teach or render apparent each of the elements of the presently pending claims. For example, the cited art, either alone or in combination, fails to teach or render apparent having layers of different concentrations of intumescent material.

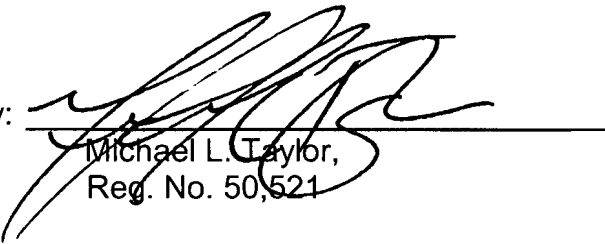
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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By: _____


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